



Vector Control Program



CDC Suggested Guidelines for Phased Response to WNV Surveillance Data

| Risk category | Probability of human outbreak | Definition |
|---------------|-------------------------------|---|
| 0 | None | Off-season; adult vectors inactive; climate unsuitable. |
| 1 | Remote | Spring, summer, or fall; areas anticipating WNV epizootic based on previous WNV activity in the region; no current surveillance findings indicating WNV epizootic activity in the area. |
| 2 | Low | Summer, or fall; areas with limited or sporadic WNV epizootic activity in birds and/or mosquitoes. No positives prior to August. |
| 3 | Moderate | Spring, summer, or fall; areas with initial confirmation of epizootic WNV in birds before August; a horse and/or a human case, or sustained WNV activity in birds and/or mosquitoes. |
| 4 | High | Areas with early season positive surveillance indicators where WN epidemic activity has occurred in the past. |
| 5 | Outbreak in progress | Multiple confirmed cases in humans; Conditions favoring continued transmission to humans (e.g., persistent high infection rate in mosquitoes, continued avian mortality due to WNV) |

Local and regional characteristics may alter the risk level at which specific actions must be taken

From: www.ccbh.net/services/environmentaldiv/wnv2004/part3.pdf



Maricopa County Treatment Criteria

Ad-hoc committee formed after 2004 outbreak.

Committee included members of local municipalities, government agencies, Maricopa County Board of Health, private citizens.

Committee established local thresholds for treatment.

Committee developed treatment criteria for Maricopa County's Vector Control Program.

Committee put emphasis on obtaining surveillance data, larviciding and to use adulticiding as final treatment option

Maricopa County Board of Supervisors approved the criteria in early 2005.



Maricopa County Treatment Criteria

Local threshold established

Local treatment threshold established for Maricopa County is 30 Culex species or 300 floodwater species collected, per trap night.

*** Note that program thresholds and aduaticiding decisions are local and will vary from County to County.**



Maricopa County Vector Control

Create a Surveillance Driven Program

Surveillance Data Drives All Treatment Decisions



Maricopa County Treatment Criteria

| | Response | Follow Up | CO2 Trap Follow Up to Determine Efficacy of Treatment | Surveillance (Routine Inspection Sites) | CDC Level |
|--|--|--|---|---|--------------|
| + WNv M | Fog 1 square mile | Set CO2 traps/survey for breeding site | Yes | Yes | 3,4,5 |
| + WNv H | Set CO2 Traps/survey for breeding site | positive mosquitoes fog 1 square mile | Yes | Yes | 3,4,5 |
| + WNv A | Set CO2 Traps/survey for breeding site | positive mosquitoes fog 1 square mile | Yes | Yes | 3,4,5 |
| Flood Water > 300 OR Culex spp > 30* | Fog 1 square mile ** | Set CO2 traps | Yes | Yes | 2 |

Ad-hoc committee recommendations. Adopted by Maricopa County Board of Supervisors and Maricopa County Board of Health in February 2005.





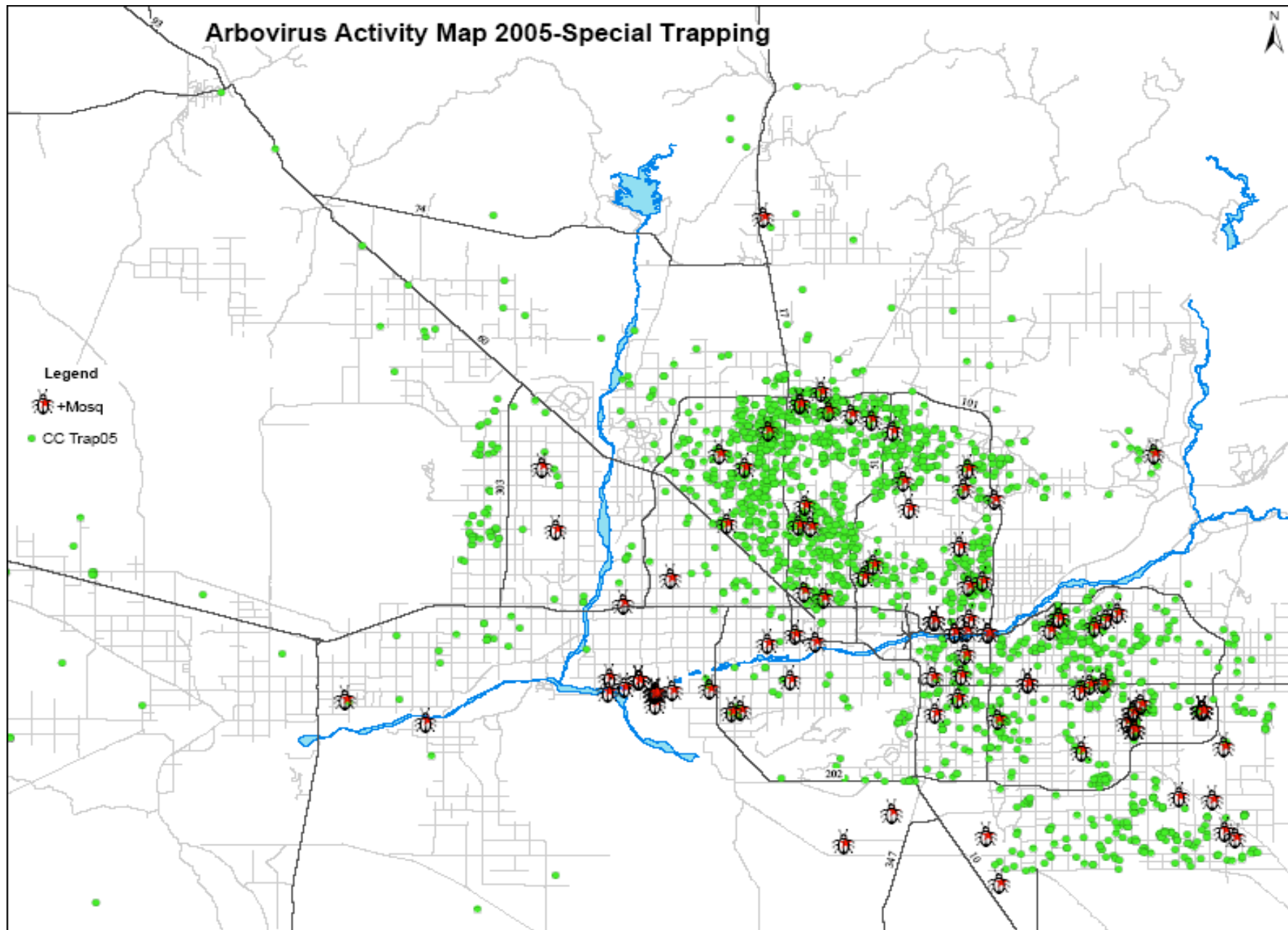


Arbovirus Activity Map 2005-Special Trapping

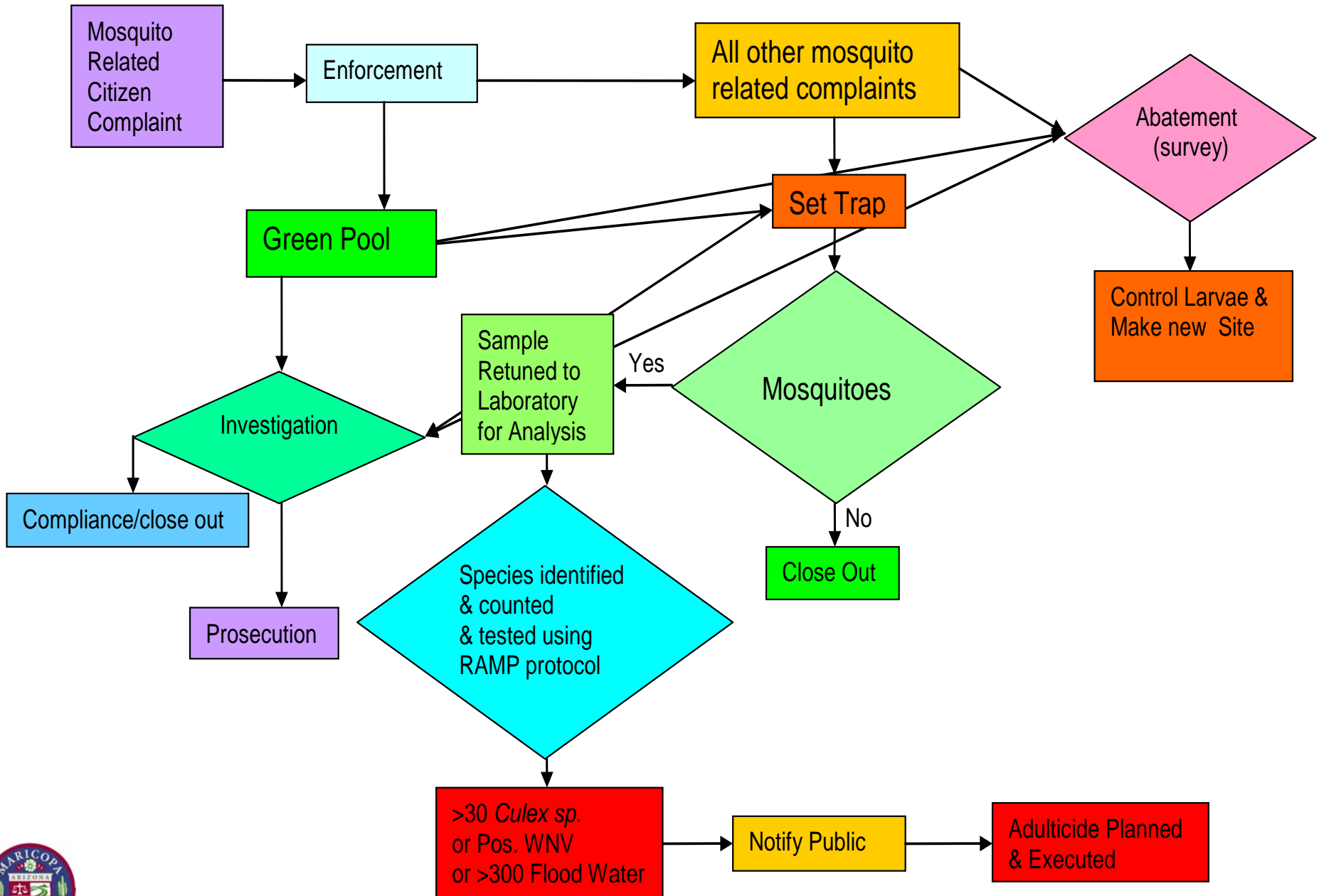


Legend

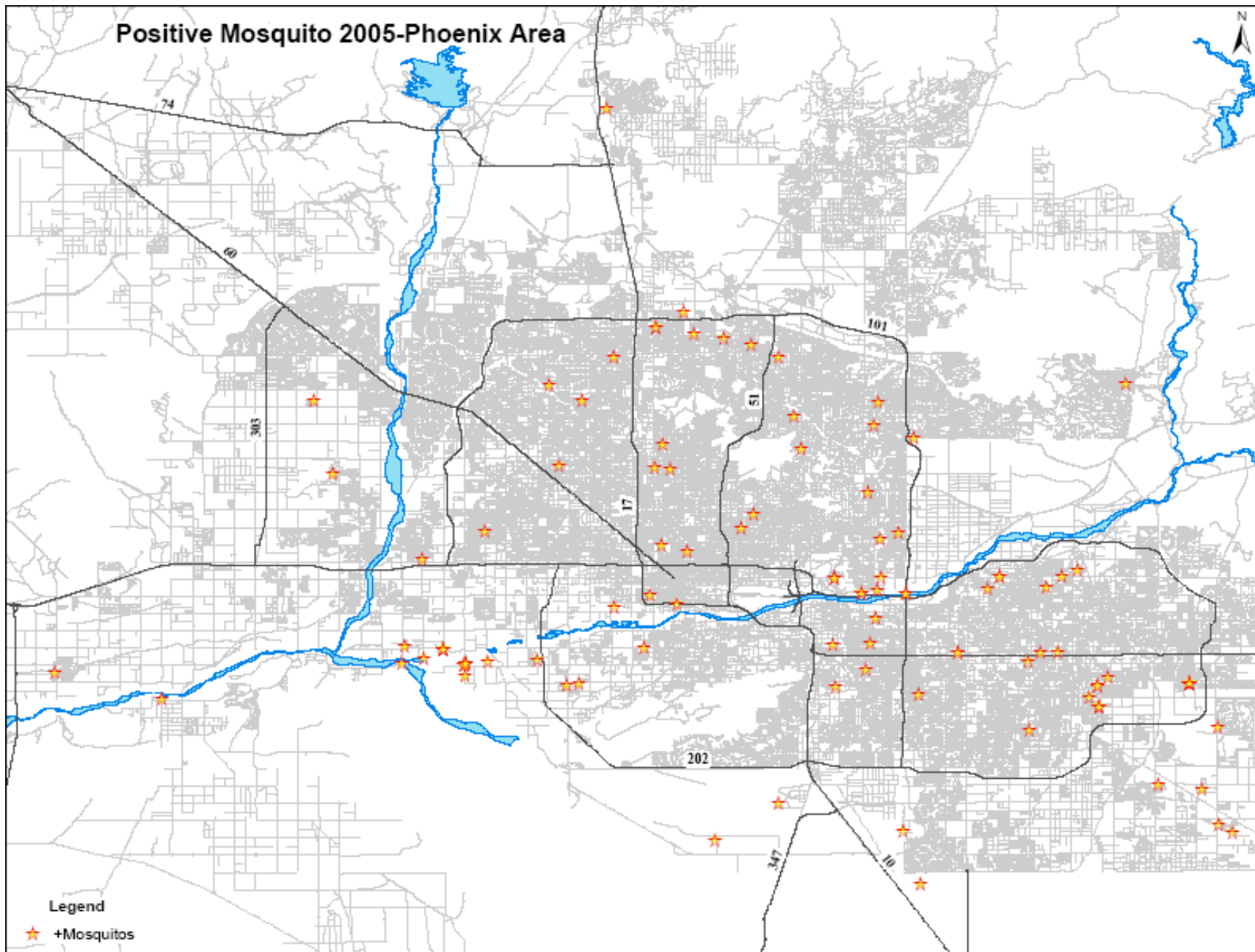
-  +Mosq
-  CC Trap05



Maricopa County Vector Control Workflow



Positive Mosquito 2005-Phoenix Area

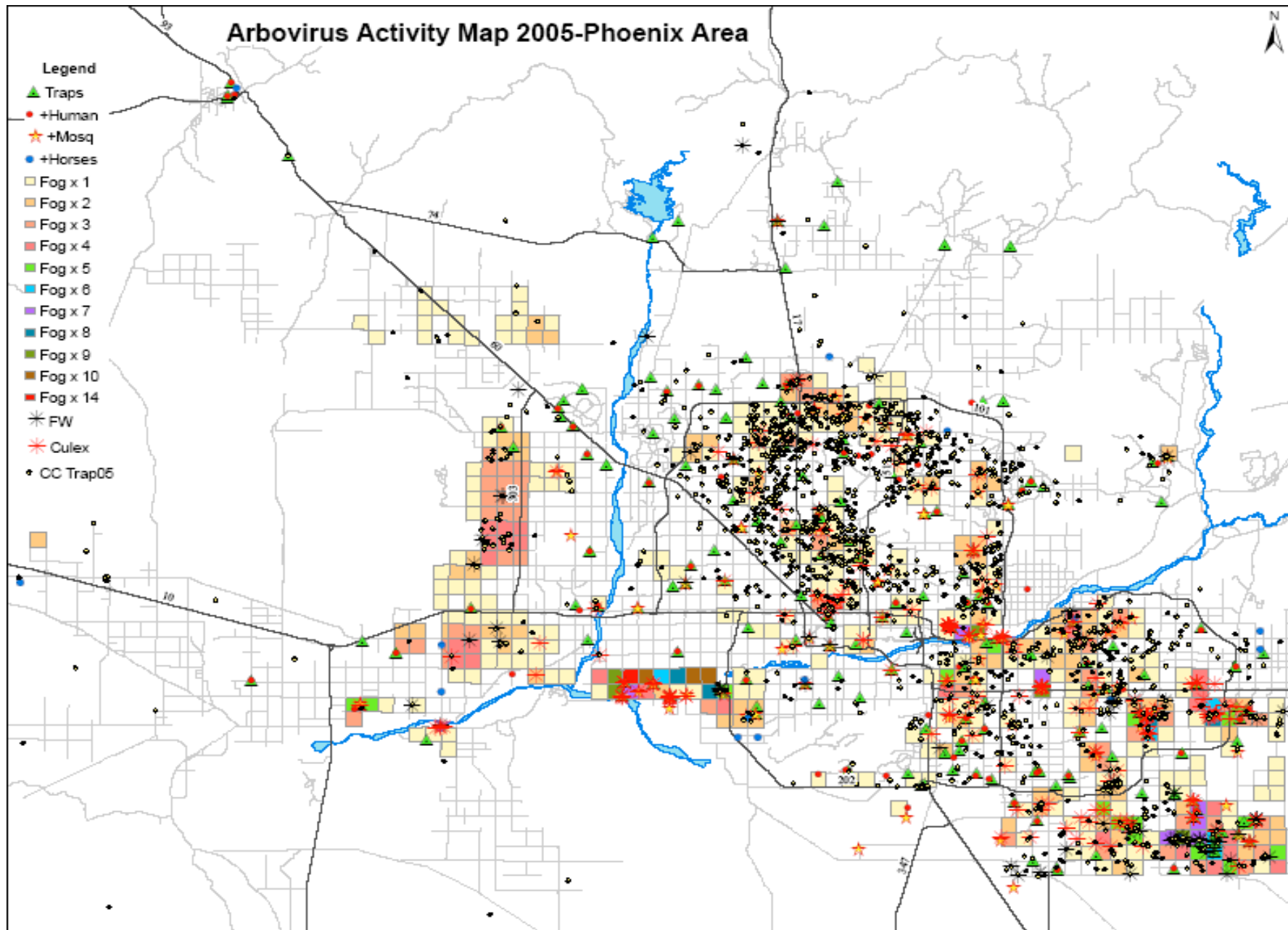


Arbovirus Activity Map 2005-Phoenix Area



Legend

- ▲ Traps
- +Human
- ★ +Mosq
- +Horses
- Fog x 1
- Fog x 2
- Fog x 3
- Fog x 4
- Fog x 5
- Fog x 6
- Fog x 7
- Fog x 8
- Fog x 9
- Fog x 10
- Fog x 14
- ✱ FW
- ✱ Culex
- CC Trap05

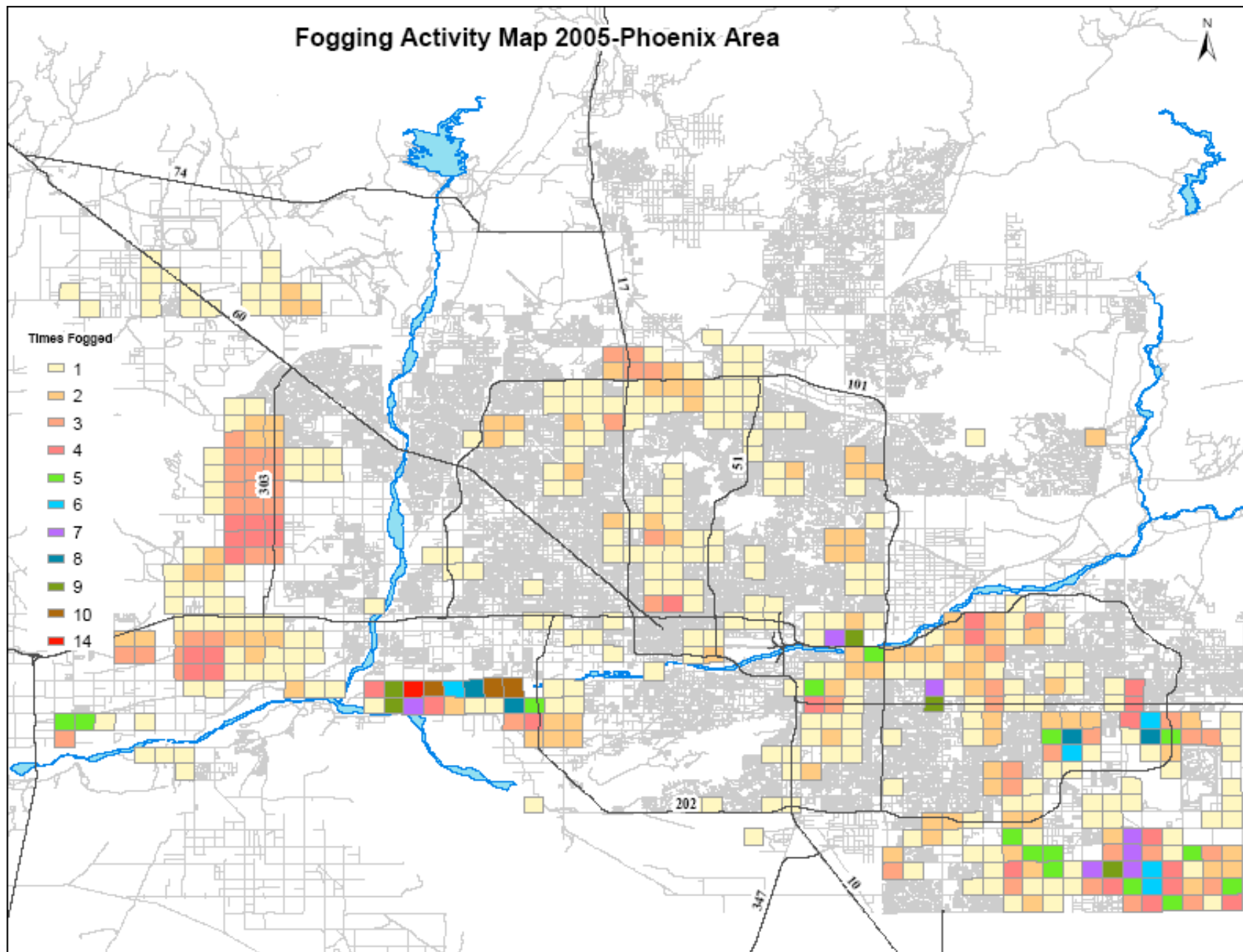


Fogging Activity Map 2005-Phoenix Area



Times Fogged

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 14

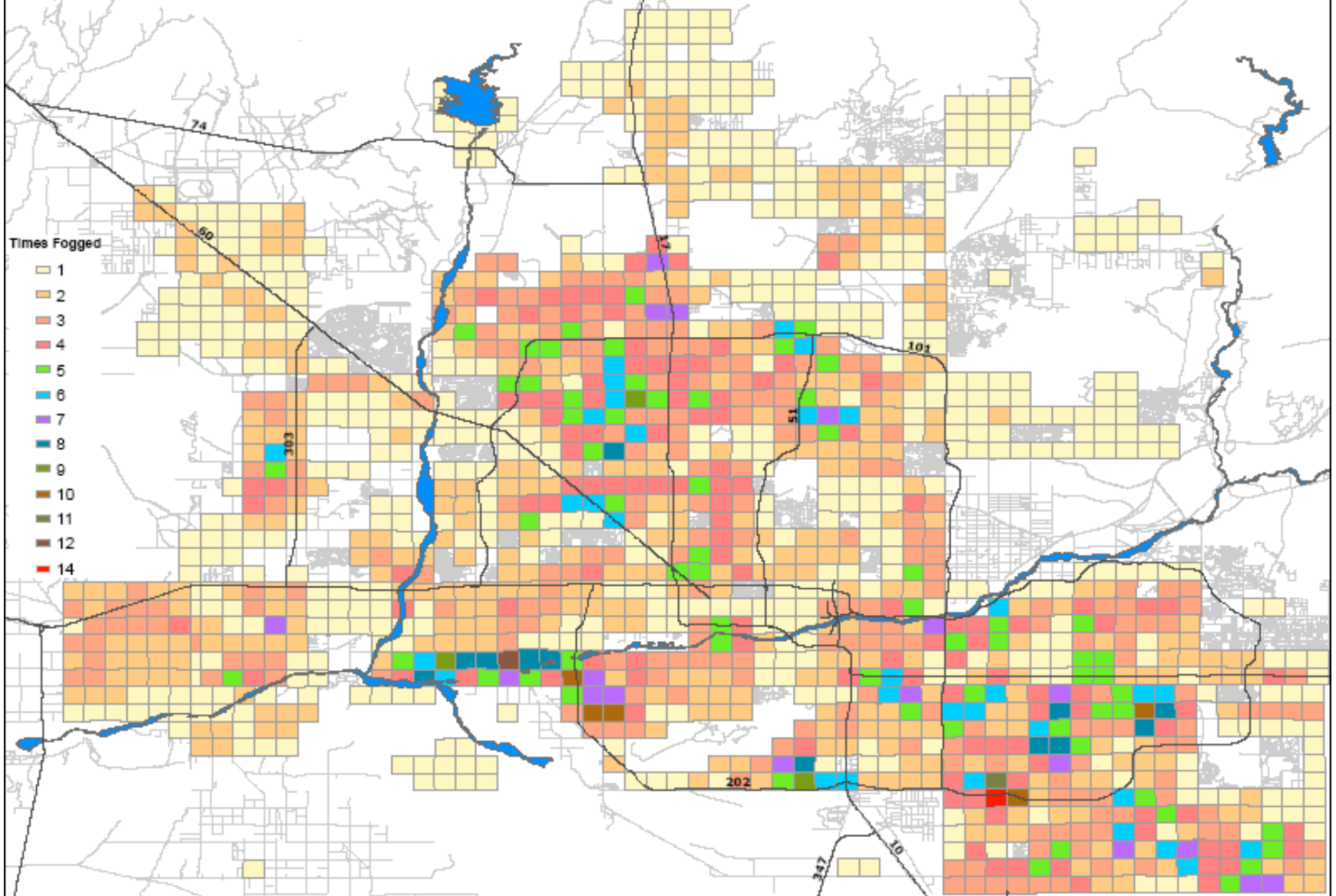


Fogging Activity Map 2004-Phoenix Area



Times Fogged

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 14



Brief overview of adulticiding program

ULV (ultra low volume) Equipment is used to apply adulticides

Current adulticide is Kontrol 30 + 30 (permethrin 30% , PBO 30%)

Application rate = 0.0035 Lbs. A.I. / Acre

Timing – adulticide is applied between the hours of 10 P.M. and 5 A.M



Questions

